



ATTACHMENT - CLAIMS LISTING

This listing of claims will replace all prior versions, and listings, of claims in the application.

1. (Currently Amended) Apparatus for the production of cement clinker with
[[a.]] a heat exchanger ~~(1) for the~~ for the preheating of ~~raw meal~~ (2) raw meal,
[[b.]] ~~a kiln~~ (3) a kiln for the final burning of the cement clinker, wherein ~~the exhaust~~
exhaust gases from the kiln flow through the heat exchanger,
[[c.]] a catalytic ~~converter~~ (5) which is converter, disposed in the direction of flow of the
exhaust gases after the heat exchanger ~~and exchanger~~, for reaction of NO with CO, and
[[d.]] ~~means~~ (6, 7) means for the analysis of the exhaust gases before and/or after the
catalytic converter,

characterised in that ~~a calciner~~ (4) is further provided for the the apparatus
further comprising a calciner for precalcination of the preheated raw meal.
2. (Currently Amended) Apparatus as claimed in Claim 1, characterised
characterized in that the calciner ~~(4) has means~~ (41, 42, 43) has means for the staged
delivery of fuel and/or means ~~(44, 45)~~ for the staged delivery of air for combustion.
3. (Currently Amended) Apparatus as claimed in Claim 1, characterised
characterized in that the calciner ~~(4) calciner~~ has an additional combustion chamber
~~(47) chamber~~ through which the exhaust gases from the kiln do not flow.

4. (Currently Amended) Apparatus as claimed in ~~one or more of Claims 1,~~
~~characterised claim 1, characterized~~ in that the calciner ~~(4)~~ calciner has means ~~(46)~~
means for the staged delivery of preheated raw meal.

5. (Currently Amended) Apparatus as claimed in Claim 1, ~~characterised~~
characterized in that a flow ~~rectifier (10)~~ rectifier is disposed upstream of the catalytic
~~converter (5)~~ converter in the direction of flow of the exhaust gases.

6. (Currently Amended) Apparatus as claimed in Claim 1, ~~characterised~~
characterized in that a separating stage ~~(15)~~ stage for heavy metals is disposed
between the heat exchanger ~~(1)~~ exchanger and the catalytic ~~converter (5)~~ converter.

7. (Currently Amended) Apparatus as claimed in Claim 1, ~~characterised~~
characterized in that the heat exchanger comprises a plurality of cyclone stages which
are disposed one above the other, wherein the raw meal flows through the individual
cyclone stages from top to bottom whilst the exhaust ~~gases (8)~~ gases pass through the
cyclone stages from bottom to top, and wherein furthermore a material deflector ~~(9)~~
deflector is provided in order to deliver a proportion of the raw meal in the region of the
uppermost cyclone stage (1a) and a proportion in the region of the cyclone stage ~~(1b)~~
stage which lies below it.

8. (Currently Amended) Apparatus as claimed in Claim 1, ~~characterised~~ characterized in
that means are provided in order to introduce exhaust air ~~(13)~~ exhaust air from a clinker

~~cooler (12)~~ cooler and/or fuel into the exhaust gases between the heat exchanger ~~(1)~~ exchanger and the catalytic ~~converter (5)~~ converter.

9. (Currently Amended) Apparatus as claimed in Claim 1, ~~characterised~~ characterized in that ~~means (50)~~ means are provided in order to introduced a reducing agent, in particular an ammonium carrier and/or hydrocarbon, in the region of the calciner and/or the heat exchanger.

10. (Cancelled)

11. (Currently Amended) Apparatus as claimed in Claim 1, ~~characterised in that a~~ fan (16) characterized in that a fan is disposed between the heat exchanger ~~(1)~~ exchanger and the catalytic ~~converter (5)~~ converter.

12. (Currently Amended) Method of producing cement clinker, wherein raw meal ~~(2)~~ meal is preheated in a heat exchanger ~~(1)~~ exchanger and is burnt in a kiln ~~(3)~~ kiln to form cement clinker and ~~the and~~ exhaust gases (8) gases from the kiln flow in succession through the heat exchanger and a catalytic ~~converter (5)~~ converter, and the exhaust gases ~~being analysed~~ are analyzed before and/or after the catalytic converter, ~~characterised in that~~ and wherein a catalytic converter reaction of NO with CO is used, and the CO content is tailored specifically to the catalytic converter by the combustion conditions in the calciner and/or by the addition of further fuel wherein the preheated raw meal is precalcined in a ~~calciner (4)~~ calciner.

13. (Currently Amended) Method as claimed in Claim 12, ~~characterised~~ characterized in that the heat ~~exchanger (1)~~ exchanger comprises a plurality of cyclone stages (~~1a, 1b, 1c~~) which are disposed one above the other, wherein the raw ~~meal~~ meal passes through the individual cyclone stages from top to bottom whilst the exhaust ~~gases (8)~~ gases flow through the cyclone stages from bottom to top, wherein the raw meal is divided up as a function of the temperature of the exhaust gases flowing through the catalytic ~~converter (5)~~ converter and is supplied in the region of two different cyclone stages.

14. (Currently Amended) Method as claimed in Claim 12, characterised in that the ~~calciner (4)~~ calciner is operated with a staged combustion and/or a staged delivery of air and/or a staged supply of raw meal.

15. (Currently Amended) Method as claimed in Claim 12, characterised in that a reducing agent, in particular an ammonium carrier and/or a hydrocarbon, is introduced in the region of the ~~calciner (4)~~ calciner and/or the heat-exchanger ~~(1)~~ exchanger.

16. (Currently Amended) Method as claimed in Claim 15, ~~characterised~~ characterized in that the quantity of reducing agent to be introduced is adjusted according to the analysis of the exhaust gases measured before and/or after the catalytic ~~converter (5)~~ converter.

17. (Cancelled)

18. (Currently Amended) Method as claimed in Claim 12, ~~characterised~~
characterized in that a proportion of the exhaust gases from the kiln is discharged
before the ~~calciner (4)~~ calciner, cooled and freed of dust and then is fed back to the
exhaust gases before the ~~catalytic-converter (5)~~ converter.

19. (Currently Amended) Method as claimed in Claim 12, ~~characterised~~
characterized in that a proportion of the exhaust gases is discharged in the direction of
flow after the ~~heat-exchanger (1)~~ exchanger is delivered to a ~~coal-mill (19)~~ coal mill and
a dust removal ~~means (20)~~ means and then is fed back to the exhaust gases before the
~~catalytic-converter (5)~~ converter.